

Pesticides Pose Compliance Challenges for Urban Runoff Permittees

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CASQA (California Stormwater
Quality Association)



CASQA

- Early 1990s
 - founded as Stormwater Quality Task Force
 - official advisory body to State Water Board
- 2002 – became formal non-profit
- Professional association – *Dedicated to the advancement of stormwater quality management, science, and regulation*
- Technical ⇔ Regulatory
- Practitioners

CASQA membership

- 2007 - 225+ ↑ memberships representing 500 individual members
- Municipal permittees - Over 25 million CA residents
- Industrial permittees
- Construction permittees
- Consultants and vendors

*An Ounce of Prevention
is worth
a Pound of Cure*

– Benjamin Franklin



Stormwater \neq Wastewater

Factor	Wastewater	Stormwater
Water – source	Inside	Outside
Water – inputs	Finite	Almost infinite
Water – volume	X	>>>X (e.g., 100X)
Infrastructure design	Collect and treat	Collect and move flood water away as fast as possible (i.e., no treatment)

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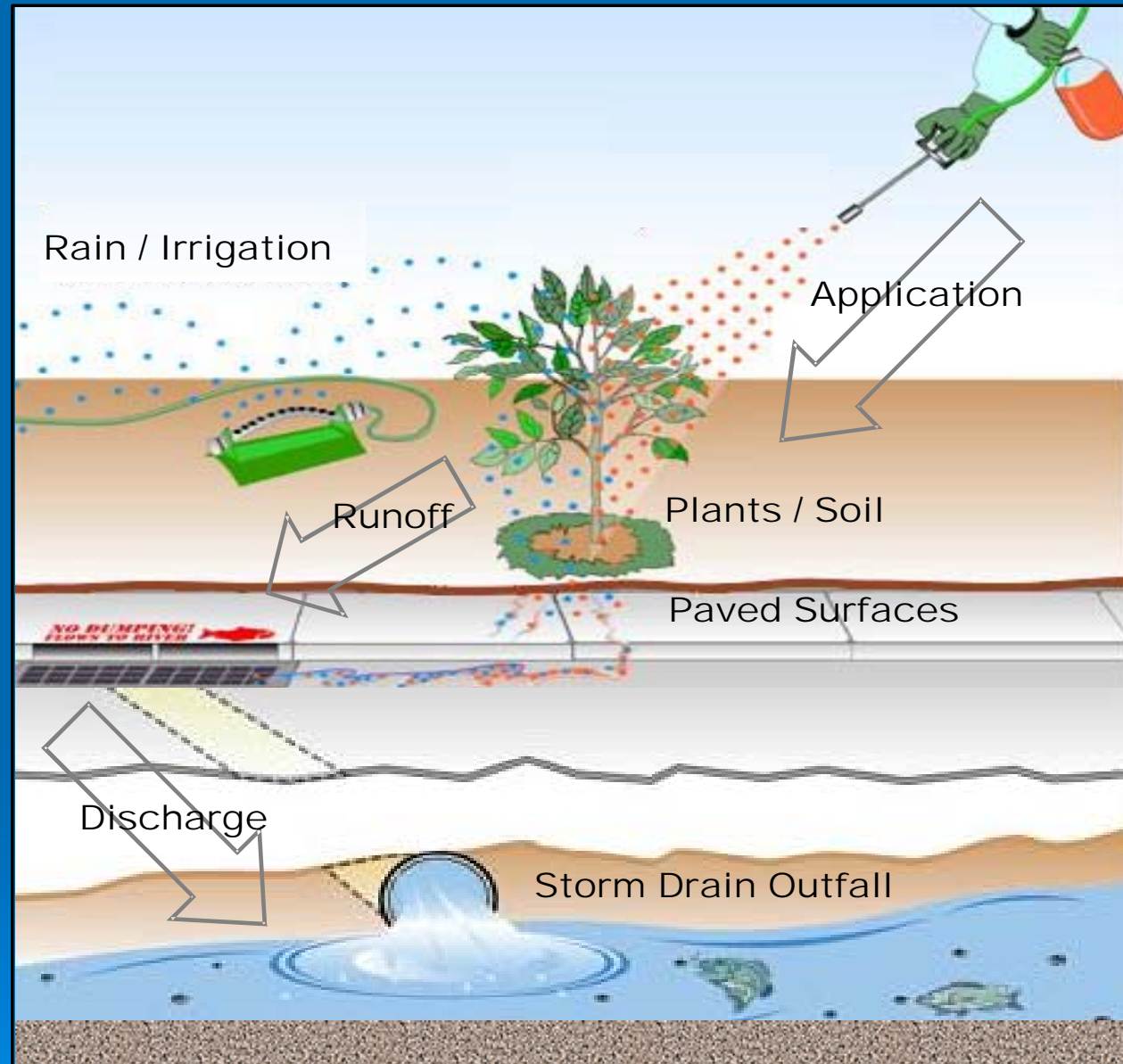
Stormwater ≠ Wastewater (cont')

Factor	Wastewater	Stormwater
Pollutants – source	=	=
Pollutants – amounts of concern (concentrations)	Medium-Small (parts per thousand, ppm, ppb)	Small-Very small (ppm, ppb, ppt)
Funding	\$X	1/10 \$X
Voting criteria – funding	Low; Exempted	Non-exempt
Relative controllability	Medium-High	Low


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Urban Runoff Pollutant Transport Processes



Stormwater Program Elements

- Construction
 - Illicit Connections / Illegal Discharges
 - Industrial (and Commercial)
 - Municipal Operations
 - New and Redevelopment
 - Public Education / Participation
 - Pollutants of Concern (TMDLs)
 - Watershed Management
- 

Pollutants of Concern (TMDLs) – Partial List

- Metals (e.g., copper, lead, zinc)
- Nutrients
- Pathogens
- Pesticides
- Sediment
- Toxicity
- Toxics (e.g., mercury, PCBs, PAHs)
- Trash (i.e., litter)
- ?????


Regulatory / Legal Challenges

- Permits – Enforceable prohibition against causing or contributing to violation of water quality standards
- TMDLs – Enforceable allocations on mass of pollutant in discharges
- Lawsuits – Third party for not meeting permit prohibitions and/or TMDL allocations

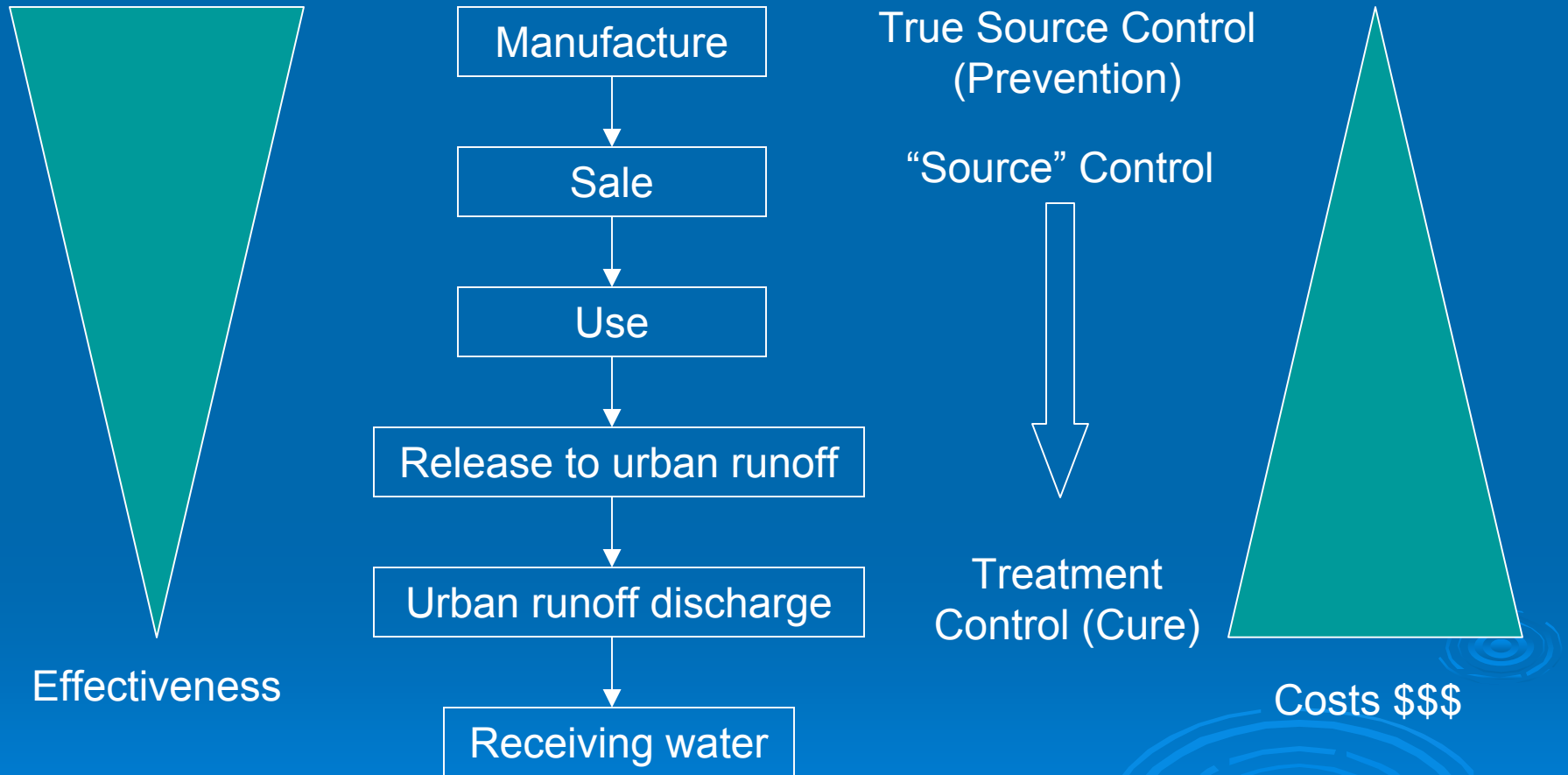
Political Challenges

- Listings of waterbodies increasing
- Stormwater is a major conveyer of water pollutants
- Stormwater program is 16 years old (i.e., plenty of time)
- Stormwater program is a failure
- Major change is warranted → numeric effluent limits imposed at discharge outfall

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Prevention – Cure Relationships



True Source Control (Prevention)

➤ National examples – urban runoff

- Lead in gasoline
- Diazinon in pesticides

➤ Lead in Gasoline

- Early 1980s – Lead levels in gas were reduced by > 90%
- Early 1990s – Approximately 90% reduction in:
 - lead levels in air
 - lead-related lung diseases
 - lead levels in runoff

True Source Control (Prevention) (cont')

➤ Diazinon in pesticides

- In 2000 – USEPA announces phase out of diazinon products
- By 2002 – amount of reported diazinon applications had decreased substantially
- By 2006 – Aquatic toxicity and diazinon concentrations in urban / suburban creeks had decreased dramatically – in many cases below TMDL targets

Stormwater – History of Partnerships

- State and Regional Water Boards – Regulations and permits
- USEPA and California DPR – Regulations and programs
- Manufacturers
 - Western States Petroleum Association – Design and management of gas stations
 - Building Industry Association – Monitoring of construction sites
 - Brake Manufacturers Council and friction material manufacturers – Composition of brake pads

Thank you

Questions?

